

Amendments to the Claims:

This listing will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A novel process for the commercial production of polyunsaturated fatty acid and micronutrients rich zero-trans shortening by chemical interesterification to produce nutritionally and fictionally superior shortening without hydrogenation. The which process involves comprises blending of palm oat and oil or palm stearin with rice bran oil, interesterification in presence of sodium methoxide catalyst, inactivation of the catalyst, washing with hot water, deoderization of the resultant product, and finally passing the interesterified product through margarine crystallizer under controlled conditions followed by packing and tempering.
2. (Currently amended) A process as claimed in claim 1, wherein the required homogeneity is attained by heating the palm stearin or palm oil to 60.80°C., then adding rice bran oil in the proper proportion to the melted palm stearin or palm oil, and charging the blend to the reactor vessel and heating to a temperature of 60-110°C. under vacuum (60-80 mmHg) with stirring.
3. (Currently amended) A process as claimed in [claims 1 - 2] claim 2, wherein 0.2-0.9% sodium methoxide catalyst is added with vigorous stirring for 5-60 mins minutes under the above conditions of temperature and vacuum specified in claim 2.
4. (Currently amended) A process as claimed in [claims 1 - 3] claim 1, wherein sodium methoxide catalyst is inactivated by adding calculated amount of citric acid (0.2-1.2%) and aqueous layer is separated and again washed with hot water at 60-90° C. till neutral.
5. (Currently amended) A process as claimed in [claims 1 - 4] claim 1, wherein the resultant interesterified product is deodorized at a temperature of 140-180°C. and under a vacuum of 1-5 mbar for 1-4 h.
6. (Currently amended) A process as claimed in [claims 1 - 5] claim 1, wherein the

resultant deodorized interesterified product at 50-80°C. is fed into the margarine crystallizer with a feed rate of 8-15 kg/hr.

7.(Currently amended) A process as claimed in [claims 1 - 6] claim 1, wherein the refrigerant temperature of the margarine crystallizer is adjusted to 5-25°C.

8. (Currently amended) A process as claimed in [claims 1 - 7] claim 1, wherein the interesterified fat fed into the margarine crystallizer is cooled to a temperature of 20-35°C.

9. (Currently amended) A process as claimed in [claims 1 - 8] claim 1, wherein the backpressure in the scraped surface heat exchanger (mutator mutator) is adjusted to 5-10 bar.

10. (Currently amended) A process as claimed in [claims 1 - 9] claim 1, wherein the interesterified fat is crystallized in the mutator at a mutator speed of 150-250 rpm.

11. (Currently amended) A process as claimed in [claims 1 - 10] claim 1, wherein the product coming out of the mutator is subjected to beating in the pinworker at a speed of 50-150 rpm.

12. (Currently amended) A process as claimed in [claims 1 - 11] claim 1, wherein the product collected from the margarine crystallizer under specified temperature of 20-35°C. and tubbed.

13. (Currently amended) A process as claimed in [claims 1 - 12] claim 1, wherein the filled product is tempered at 25-35°C. for 3-10 days to get a plastic shortening with a requisite granular structure; which fall within the limits of specifical requirements.

14. (Currently amended) A process as claimed in [claims 1 - 13] claim 1, wherein tocols enriched (900-1000 ppm) zero-traps trans (Currently amended) shortening is obtained.

15. (Currently amended) A process as claimed in [claims 1 - 14] claim 1, wherein

phytosterols enriched (0.5.-1%) zero-trans shortening is obtained.

16. (Currently amended) A process as claimed in [claims 1 - 15] claim 1, wherein oryzanol enriched (0.5-0.8%) zero-trans shortening is obtained.

17. (Currently amended) A process as claimed in [claims 1 - 16] claim 1, wherein the interesterified zero-trans shortening fall under the category of all-purpose shortenings with good plasticity and maximum [beta]' polymorphic form (72%).

18. (Currently amended) A process as claimed in ,[claims 1 - 17] claim 1, wherein the interesterified zero-trans all-purpose shortening has good oxidative stability.

19. (Currently amended) A process as claimed [claims 1 - 18] claim 1, wherein the polyunsaturated fatty acid and micronutrients rich zero-traps-trans all-purpose shortening meets the specifical requirements such as slip melting point, FFA, moisture, unsaponifiable matter and iodine value prescribed for shortening.

20. (Currently amended) A novel process as claimed in claim 1 for the production of zero-trapstrans polyunsaturated fatty acid and micronutrients rich all-purpose shortenings with characteristics as in Table 1, 2, 3 and 4 by interesterification substantially as herein described with reference to the example cited.